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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

YODICHKAS, ANEETA

ART UNIT

PAPER NUMBER

2627

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/595,628	TAKAHASHI, YUUICHI	
	Examiner	Art Unit	
	Aneeta Yodichkas	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/1/06, 5/1/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 4, 5 and 6 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claims. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1 and 2** are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,738,322 B2 to *Amble et al.*

As to **claims 1 and 2**, *Amble* discloses an information processing apparatus for performing at least one of a recording operation and a reproduction operation for an information medium having an information layer, the information processing apparatus comprising: a plurality of light sources (Fig. 2, column 5, lines 26-27, column 6, lines 9-11), where there is a servo laser (26) and a R/W laser (48); a convergence -lens (14) for converging light emitted from the plurality of light sources onto the information layer of the information medium (Fig. 1 and 2, column 5, lines 4-9), where objective lens (14) is the convergence lens; and a controlling means for controlling the plurality of light sources (Fig. 2, column 6, lines 24-37), where wideband servo system (64) controls the

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lasers based off the signal received from servo detector (36) and the actuators also control the lasers, wherein the information medium further has a visual information layer capable of recording visually identifiable visual information, the visual information layer facing the information layer (Fig. 2, column 5, lines 6-13), where the data plane (18) includes several data layers and are visible under a microscope, the controlling means controls the plurality of light sources such that the plurality of light sources emit light simultaneously, when the visual information is recorded onto the visual information layer (Fig. 2, column 5, lines 26-27, column 6, lines 9-11), where the servo laser (26) and the R/W laser (48) are turned on simultaneously in order to control focus and tracking while reading and writing to the disc, and the controlling means controls the plurality of light sources such that the plurality of light sources emit light alternately, when the visual information is recorded onto the visual information layer (Fig. 2, column 5, lines 26-27, column 6, lines 9-11), where the light sources (26, 48) are turned on individually depending on whether reading or writing is being performed if servo control is being performed.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. **Claims 3-6** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,738,322 B2 to *Amble et al.* in view of U.S. Patent No. 7,142,497 B2 to *Hirai*.

As to **claim 3**, *Gage* discloses an information processing apparatus, wherein: the plurality of light sources includes a first light source and a second light source (Fig. 1 and 2A-C, column 4, lines 30-40), where there are three beams that come from different light sources.

Gage is deficient in disclosing the information processing apparatus is configured to satisfy a relationship of $D1 \leq WD \leq D2$, when the visual information is recorded onto the visual information layer, where WD denotes a distance between the convergence lens and a surface of the visual information layer facing the convergence lens, D1 denotes a distance between the convergence lens and a first converged light spot at which the light from the first light source is converged by the convergence lens such that a light intensity at a center of the converged light becomes maximum, and D2 denotes a distance between the convergence lens and a second converged light spot at which the light from the second light source is converged by the convergence lens such that a light intensity at a center of the converged light becomes maximum.

However, *Hirai* discloses the information processing apparatus is configured to satisfy a relationship of $D1 \leq WD < D2$, when the visual information is recorded onto the visual information layer, where WD denotes a distance between the convergence lens (1108) and a surface of the visual information layer facing the convergence lens, D1 denotes a distance between the convergence lens and a first converged light spot at

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which the light from the first light source is converged by the convergence lens such that a light intensity at a center of the converged light becomes maximum, and D2 denotes a distance between the convergence lens and a second converged light spot at which the light from the second light source is converged by the convergence lens such that a light intensity at a center of the converged light becomes maximum (Fig. 31A-C, column 37, lines 26-36), where the distances between the convergence lens or object lens (1108) and the surface of the information layer varies with different wavelengths of light.

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to have modified the information processing apparatus with a plurality of light sources as taught by *Gage* by including different distances between the information layer and the convergence lens for different light sources as taught by *Hirai*. The suggestion/motivation would have been in order to adjust the beam diameter based on the wavelength of the light (*Gage*, Fig. 31A-C, column 37, lines 26-51).

As to **claim 4**, *Gage* is deficient in disclosing an information processing apparatus, wherein the information processing apparatus is configured such that the light emitted from the first light source enters the convergence lens as a quasi-parallel light and the light emitted from the second light source enters the convergence lens as a divergent light or converging light.

Hirai discloses an information processing apparatus, wherein the information processing apparatus is configured such that the light emitted from the first light source (1201a, 1301a) enters the convergence lens (1108) as a quasi-parallel light and the light emitted from the second light source (1401a) enters the convergence lens (1108)

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as a divergent light or converging light (Fig. 27, column 36, lines 4-9, 30-35), where the lights from lasers (1201a, 1301a) are quasi-parallel to the convergence or object lens (1108) and the light from laser (1401a) is divergent in relation to convergence lens (1108). In addition, the same motivation is used as the rejection in claim 3.

As to **claim 5**, *Gage* discloses an information processing apparatus, wherein: the plurality of light sources includes a first light source and a second light source (Fig. 1 and 2A-C, column 4, lines 30-40), where there are three beams which come from a different light sources.

Gage is deficient in disclosing the information processing apparatus is configured to satisfy a relationship of $NA1 > NA2$ and $P1 > P2$, where $NA1$ denotes a numerical aperture of the convergence lens which converges light emitted from the first light source, $P1$ denotes a power for emitting light from the first light source, $NA2$ denotes a numerical aperture of the convergence lens which converges light emitted from the second light source and $P2$ denotes a power for emitting light from the second light source.

However, *Hirai* discloses the information processing apparatus is configured to satisfy a relationship of $NA1 > NA2$ and $P1 > P2$, where $NA1$ denotes a numerical aperture of the convergence lens which converges light emitted from the first light source, $P1$ denotes a power for emitting light from the first light source, $NA2$ denotes a numerical aperture of the convergence lens which converges light emitted from the second light source and $P2$ denotes a power for emitting light from the second light source (Fig. 22, column 31, lines 39-44, column 32, lines 11-16, 57-61), where $NA1$ is

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0.67 and NA2 is 0.65 and as numerical aperture decreases, so does the power. In addition, the same motivation is used as the rejection in claim 3.

As to **claim 6**, *Gage* discloses an information processing apparatus, wherein: the plurality of light sources includes a first light source and a second light source (Fig. 1 and 2A-C, column 4, lines 30-40), where there are three beams which come from a different light sources.

Gage is deficient in disclosing the information processing apparatus is configured to satisfy a relationship of $\lambda_1 < \lambda_2$ and $P_1 > P_2$, where λ_1 denotes a central wavelength of the first light source, P_1 denotes a power for emitting light from the first light source, λ_2 denotes a central wavelength of the second light source and P_2 denotes a power for emitting light from the second light source.

However, *Hirai* discloses the information processing apparatus is configured to satisfy a relationship of $\lambda_1 < \lambda_2$ and $P_1 > P_2$, where λ_1 denotes a central wavelength of the first light source, P_1 denotes a power for emitting light from the first light source, λ_2 denotes a central wavelength of the second light source and P_2 denotes a power for emitting light from the second light source (Fig. 22, column 31, lines 39-44, column 32, lines 11-16, 57-61), where λ_1 is 407 nm and λ_2 is 660 nm for the corresponding 0.67 and 0.65 NAs respectively and as the NA decreases, so does the power. In addition, the same motivation is used as the rejection in claim 3.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aneeta Yodichkas whose telephone number is (571)

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272-9773. The examiner can normally be reached on Monday-Thursday 8-5, alternating Fridays, 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jorge L Ortiz-Criado/
Primary Examiner, Art Unit 2627

/A.Y./
7/8/09